THE ACADEMY OF SCIENCE OF ST. LOUIS.

At the meeting of the Academy of Science of St. Louis of December 4, 1899, the following subjects were presented:

Dr. Edward H. Keiser talked informally on Some Derivatives of Acetylene, exhibiting specimens of the new liquid acetylene iodide discovered by him in January, 1899. He described the methods of making the compound, and gave an account of its chief physical and chemical properties. The liquid acetylene diiodide solidifies at -21° C. and boils at 185° . It has the percentage composition and molecular weight represented by the formula $C_2H_2I_2$, and is isomeric with the well known solid acetylene diiodide. The speaker announced the discovery of a new method of making the liquid acetylene diiodide, namely, by heating the solid compound to 260° in a sealed tube. The solid compound is thereby partially converted into the liquid compound. Similarly, if the pure liquid diiodide is heated to 260° in a sealed tube, on cooling down, the liquid will be found to have been partially converted into the solid compound. All the facts known indicate that these two iodides of acetylene are stereoisomers, and that their configuration must be represented by the stereometric formulas:

Since Dr. Keiser has found that the solid acetylene diiodide can be converted into fumaric acid, it follows that the first of the two formulas represents the solid acetylene diiodide and the second one the liquid diiodide. Further experiments upon these compounds are under way, and the attempt will be made to convert the liquid diiodide into maleic acid.

Dr. L. Bremer demonstrated some tests for glucose by means of anilin dyes, showing that nearly all of the 'alkaline' anilin dyes, when rendered basic by the addition of sodium hydrate, become decolorized, or have their color greatly modified, on heating, in case glucose is presented. The reactions shown were espec-

ally pretty in the case of methylene blue and safranine.

Professor Nipher announced that he had nearly completed preparations for the measurement of wind pressures on the sides of the main building of Washington University. The pressures are to be measured at various points along the west end of the building, having a width of about 50 feet, and along the north front, which is something over 200 feet in length. Simultaneous measurements of wind pressure and wind velocity and direction will be made. The method used is that tested by him on the trains of the Illinois Central Railroad during the summer of 1897. The method was described in No. 1, Vol. VIII., of the Transaction of the Academy of Science of St. Louis. An invitation was extended to members to visit the University and inspect the apparatus.

Professor H. Aug. Hunicke spoke briefly on some observations which he had recently made on the boiling temperature of hydrocarbons, from which it appeared that when T is the boiling temperature (absolute scale), r is radius of gyration of the molecule, and a is a constant, then $T^2 = ar$. This holds for the entire series of saturated hydrocarbons, including all isomers. The speaker stated that his observations had not yet been extended beyond the series indicated.

WILLIAM TRELEASE,
Recording Secretary.

DISCUSSION AND CORRESPONDENCE.

DARK LIGHTNING.

MAY I be allowed to make some comment, on the interesting article by Professor Wood on 'Dark Lightning.' He is mistaken in supposing that my results on the same subject have only appeared in a photographic journal. The first announcement was a note read before the Physical Society of London on June 22, 1889, which was published in the *Electrician*, the *Philosophical Magazine* and the *Proceedings of the Society*.

Further details were the subject of a paper read at the Newcastle meeting of the British Association in August of the same year, and an abstract of it appears on page 507 of the Annual Report. Since then there have been numerous